

No. 640,112.

Patented Dec. 26, 1899.

W. L. DENNIS.

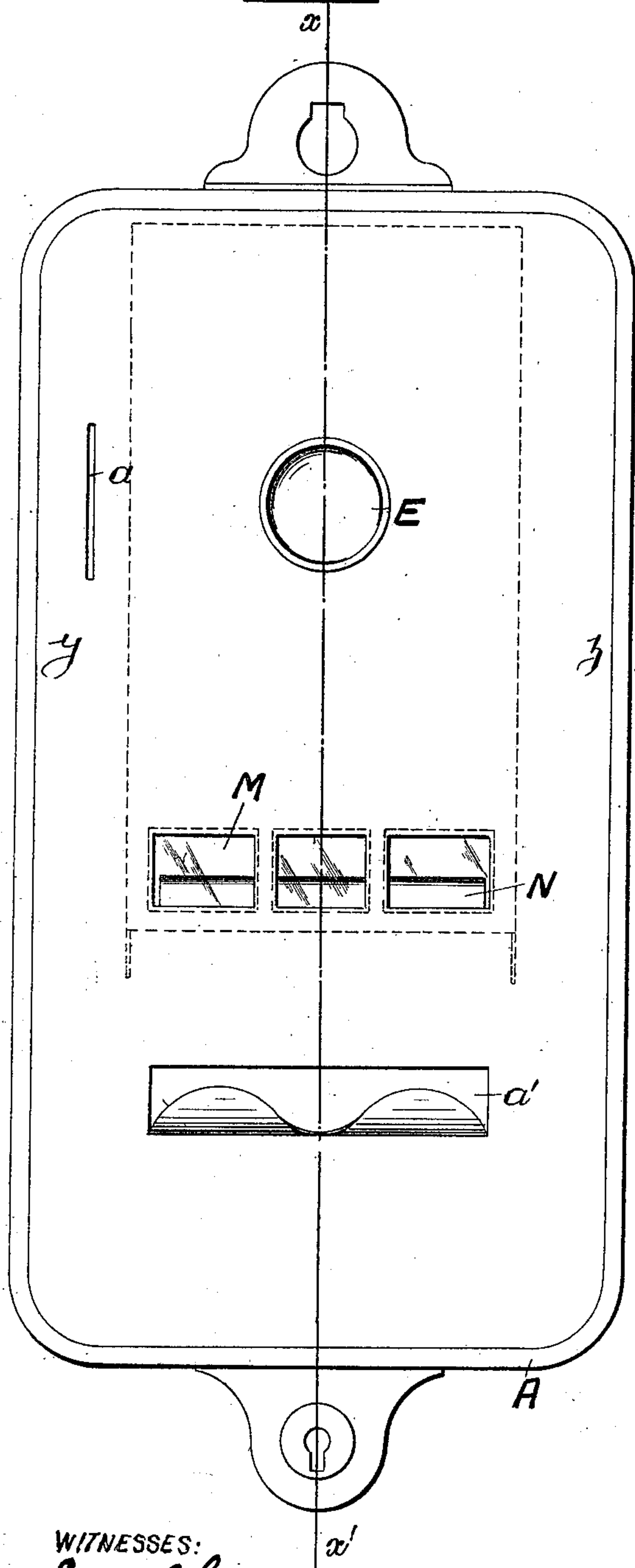
PREPAYMENT OR COIN-IN-THE-SLOT MACHINE.

(Application filed Aug. 15, 1899.)

(No Model.)

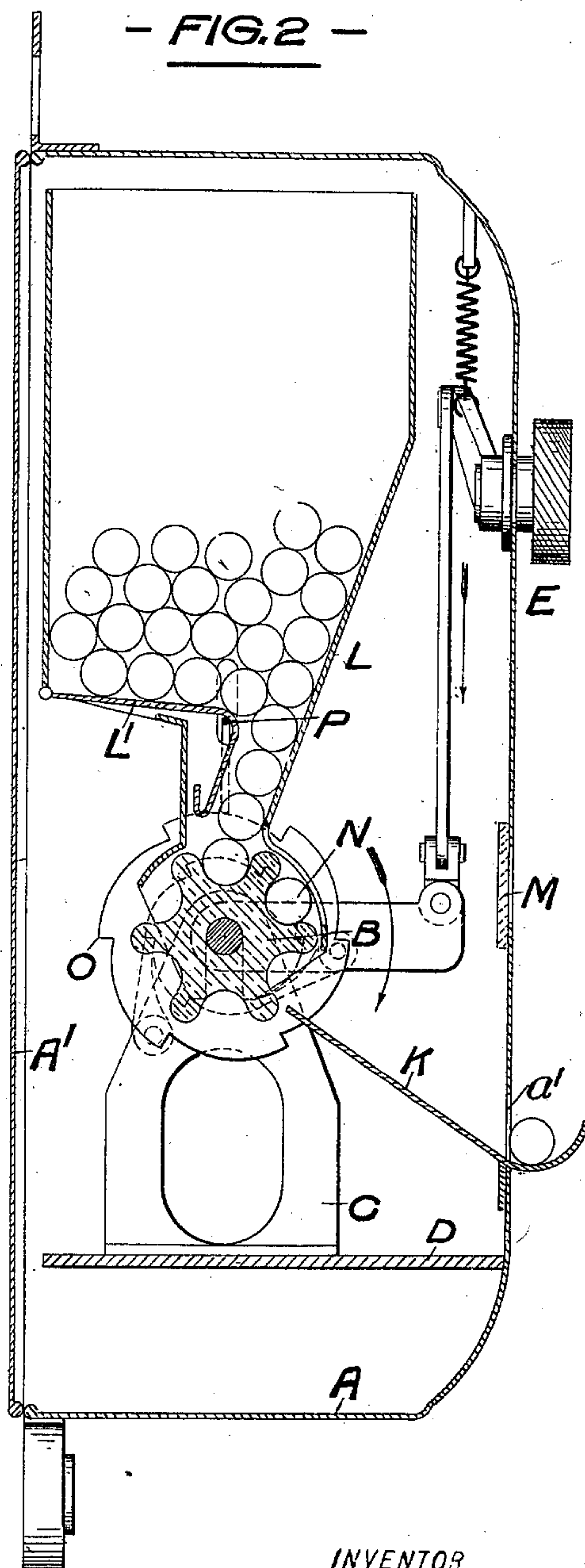
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— FIG. 1 —



WITNESSES:
Ella L. Giles
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— FIG. 2 —



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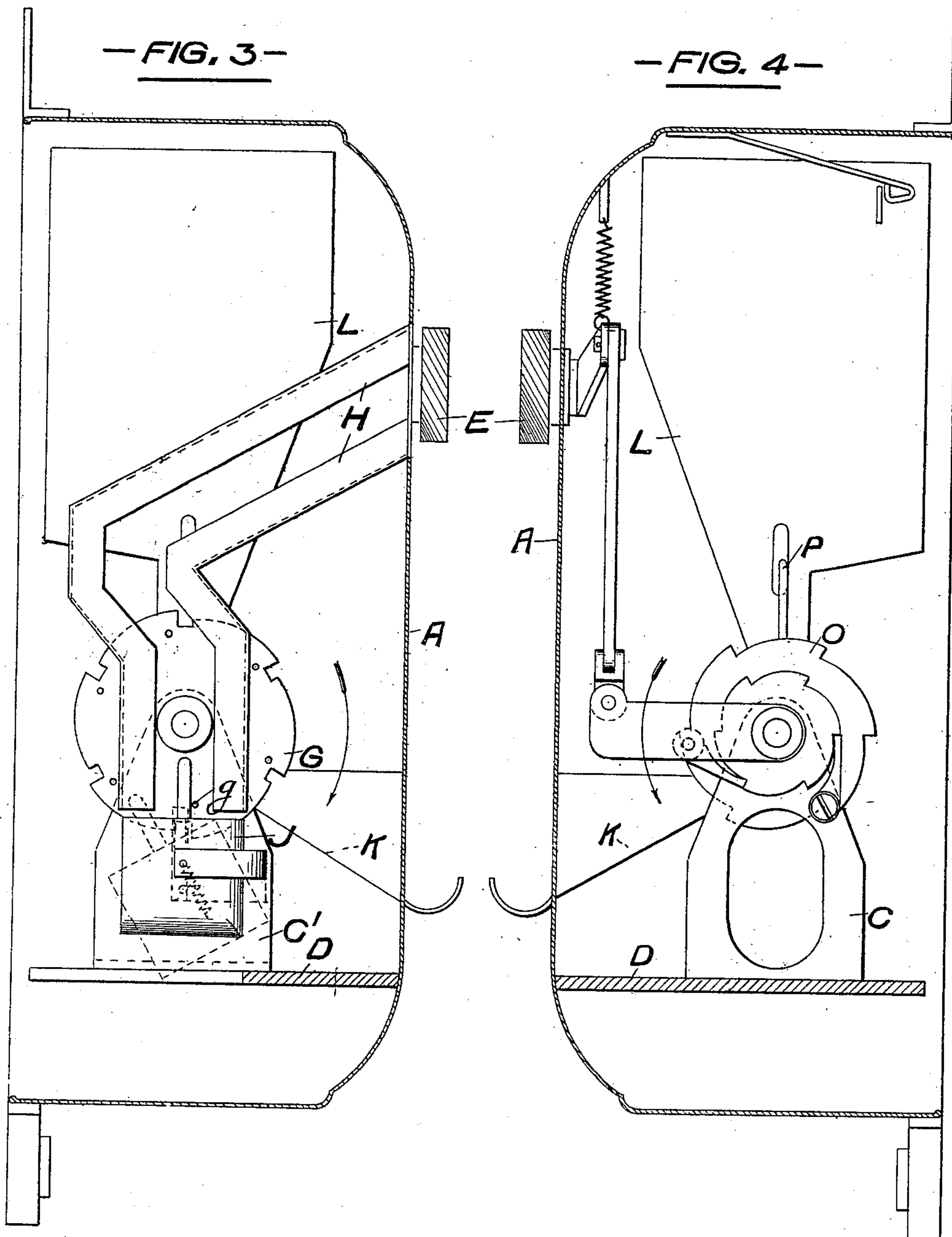
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4 Sheets—Sheet 2.



WITNESSES:

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Chas. W. ...

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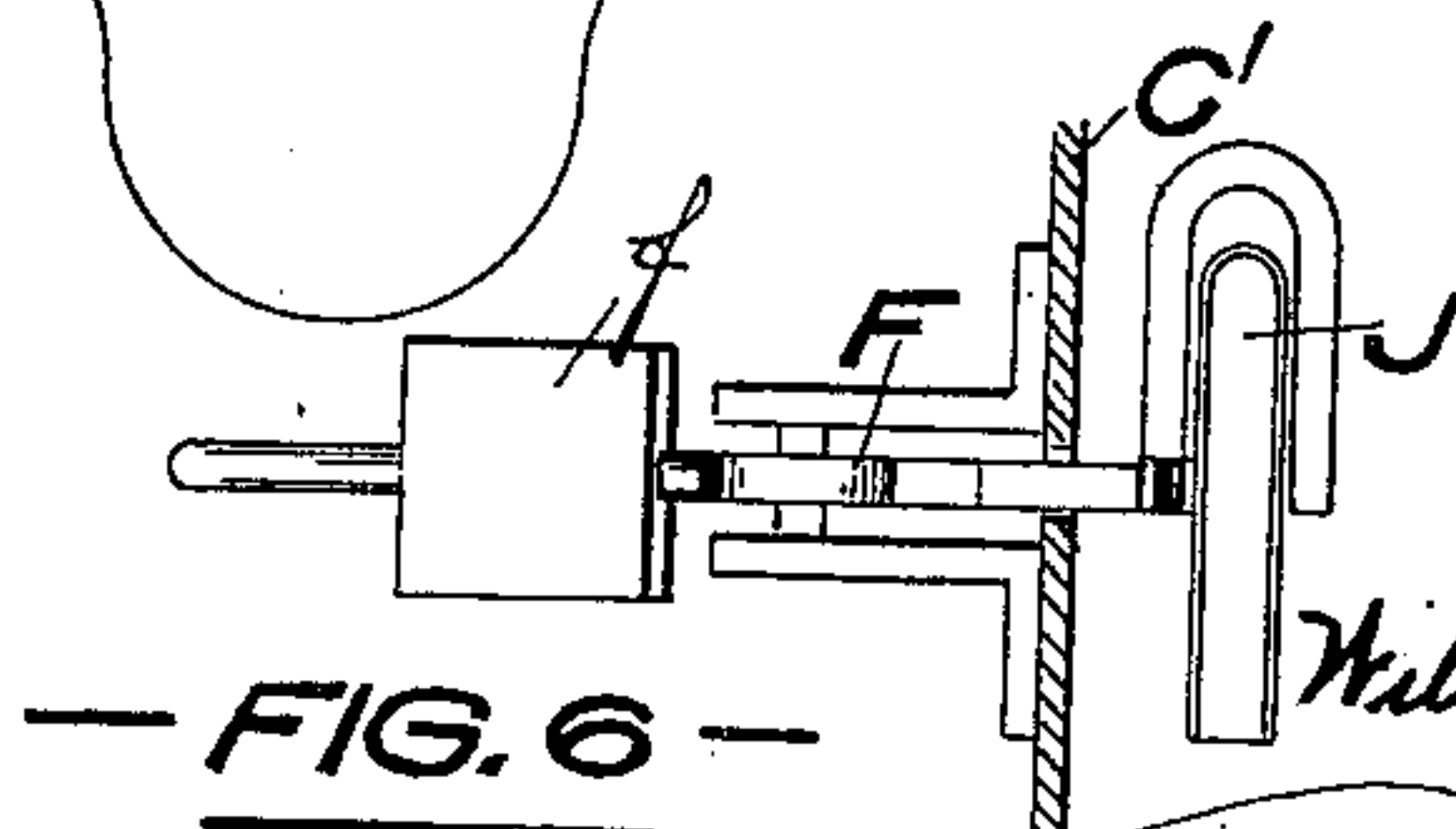
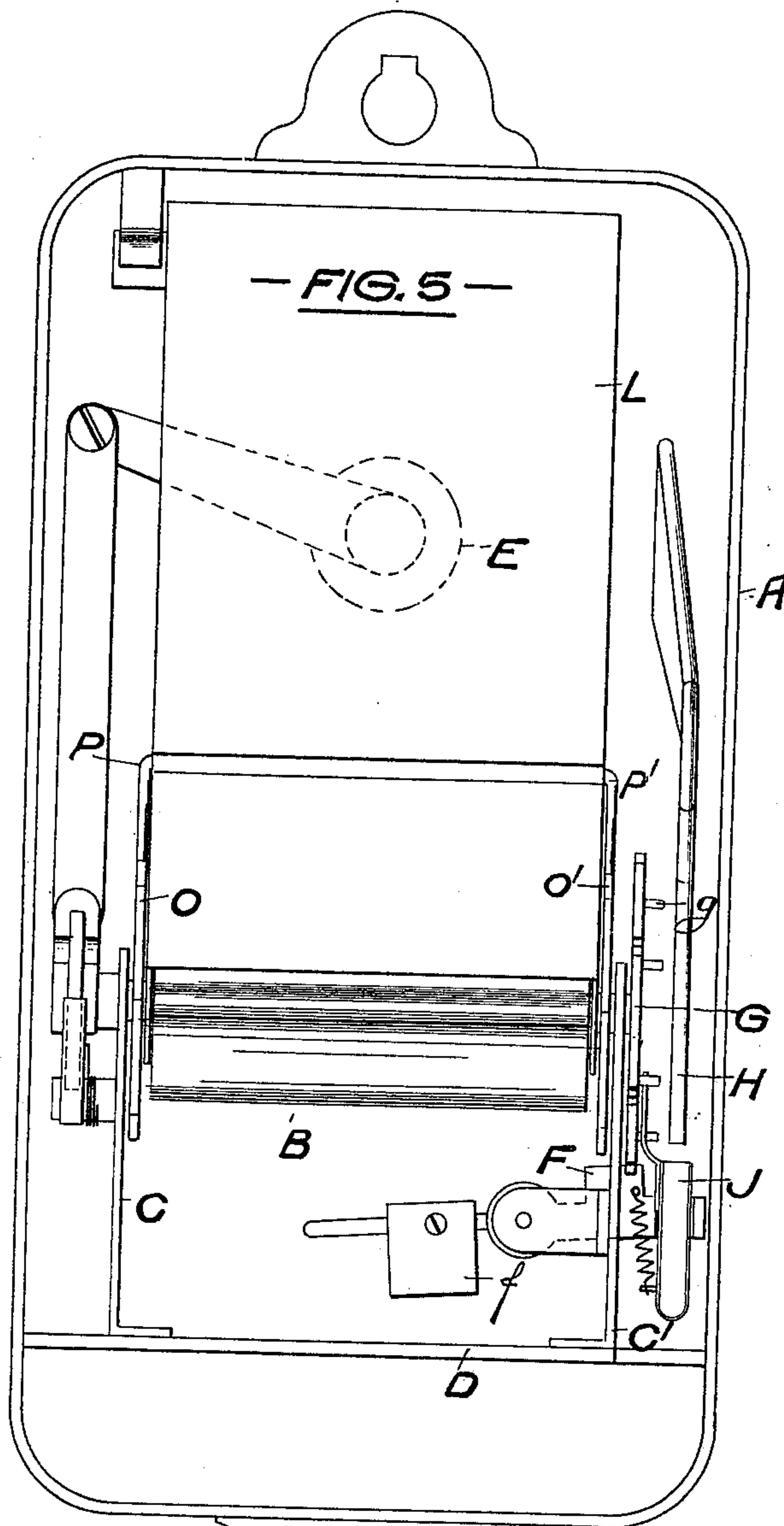
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4 Sheets—Sheet 3.



WITNESSES:
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Chas. W. ...

INVENTOR

William Luke Dennis

BY

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UNITED STATES PATENT OFFICE.

WILLIAM LUKE DENNIS, OF BIRMINGHAM, ENGLAND.

PREPAYMENT OR COIN-IN-THE-SLOT MACHINE.

SPECIFICATION forming part of Letters Patent No. 640,112, dated December 26, 1899.

Application filed August 15, 1899. Serial No. 727,276. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LUKE DENNIS, architect, a subject of the Queen of Great Britain and Ireland, and a resident of 99 Corporation street, in the city of Birmingham, England, have invented certain new and useful Improvements Relating to Prepayment or Coin-in-the-Slot Machines, (for which I have filed an application in Great Britain, No. 23,145, bearing date November 3, 1898,) of which the following is a specification.

This invention consists of improvements relating to prepayment or coin-in-the-slot machines for the delivery of cigarettes, chocolate, and other articles, my object being to construct simple coin-freed mechanism in such a manner as to insure its reliable working and to permit of adjustment to suit coins of varying value and to compactly arrange the complete machine within a small compass.

In the four accompanying sheets of explanatory drawings to be hereinafter referred to, Figure 1 is a front elevation, and Fig. 2 a sectional side elevation through the line $x x'$, Fig. 1, representing a cigarette-delivery machine constructed in accordance with my invention. Fig. 3 is a view from the side y of the machine; and Fig. 4, a view from the side z , the side plate being omitted in each view. Fig. 5 is a back view of the machine with the hinged back plate or door removed, and Fig. 6 a plan of the weighted locking-lever. Fig. 7 is a side elevation, and Fig. 8 a plan, showing a modified type of hopper, while Fig. 9 is a side elevation, and Fig. 10 a front or end elevation, showing, to a larger scale, the arrangement of parts for the operation of the shutters on the hopper-partitions.

The same reference-letters in the different views indicate the same parts.

In constructing a machine in accordance with my invention for the delivery of cigarettes I employ a small casing, as A, of a rectangular or other shape (suitable for suspending from a wall or to be otherwise supported) and preferably of electroplated sheet metal, having a slot a at the upper end of its outer face for the insertion of the coin and an aperture a' at the lower end for the discharge of the cigarette. Within the casing I mount a barrel B, having longitudinal grooves around its surface, each of such grooves being of suf-

ficient dimensions to receive a cigarette. The barrel is mounted on a suitable spindle or trunnions carried in bearings formed by the side plates C C', which are mounted on the cross-plate D, fixed within the casing A. The rotation of the barrel B is effected by the turning of a small knob or handle E on the exterior of the casing, the circular movement of the knob being transmitted to the barrel by a lever-and-ratchet device, such as shown, or other like mechanism arranged within the casing. The barrel is normally locked or prevented from rotation by a spring or weighted lever, as F, which engages with notches formed around the periphery of a disk G, secured to one end of the barrel or its spindle; but on the end of the lever F which is immediately below the end of the coin tube or channel H in the interior of the casing I pivot a catch-box J, and on the coin falling therein the lever F is depressed, and thus becomes disengaged from the notched disk G. On moving the external knob E the barrel can then be rotated a sufficient distance to cause the discharge of a cigarette from one of the barrel-grooves down an inclined chute K, and thence through the discharge-aperture a' . During such movement the pivoted catch-box J is tilted against the action of a suitably-arranged spring (to the position indicated by dotted lines at Fig. 3) by one of a number of projecting pins g , disposed around the face of the notched disk G and engaging the arm of the catch-box for the purpose of causing the coin to drop out and fall to the bottom of the casing. On the discharge of the coin from the catch-box the counterweight f will raise the lever and cause it to engage with the next notch in the disk G, and thus the barrel will be again locked until another coin is passed through the slot.

The cigarettes are fed onto the longitudinally-grooved barrel from a magazine or hopper, as L, arranged within the casing.

By adjustment of the counterweight on the locking-lever F the mechanism can be so set as to be freed with coins of varying value, according to the quality of the article to be supplied.

In the construction of a machine in accordance with my invention for the sale and delivery of packets of chocolates or other ar-

articles I employ a rotatable barrel having suitable apertures for the reception of the articles.

The entire back plate A' of the casing is hinged and arranged to serve as a door for access to the interior of the machine for charging the same and for the withdrawal of the coins, and I provide a suitable window or sight-apertures, as M, for inspection purposes, and to enable a purchaser to see that a cigarette is on the barrel ready for delivery before inserting his coin in the aperture a. Thus, as represented at Fig. 1, the cigarette N can be seen through the window, the portion of the hopper immediately at the rear of the window being suitably perforated to permit of inspection.

To prevent a stoppage or jamming of the cigarettes in the hopper L, I employ a hinged base-piece, as L', which is vibrated by the action of the ratchet-like wheels O O' on the stalks P P', projecting from the said hinged base-piece.

I sometimes employ a hopper or magazine having a number of separate compartments, such as shown by Figs. 7 to 10, inclusive, each compartment receiving a single row or column of cigarettes. At the lower part of each partition I arrange a sliding shutter, as Q, each shutter being normally kept in its closed position (against the tension of a spring, as R) by lever-shaped bolts, as S. When the shutters are thus kept closed, the cigarettes cannot pass from the compartments controlled by the said shutters along the inclined lower part of the hopper, and thence to the grooved barrel. At the top of each row or column of cigarettes I place a weight, as T, and on the withdrawal of the cigarettes from a particular row or column its weight descends until, when the column is exhausted, the reduced ends of the weights (which project through slots in the sides of the hopper) strike the adjacent end of the lever-bolts S, and so withdraw the opposite ends from engagement with the shutter Q. By the action of the spring R the shutter is then raised to permit of the discharge of cigarettes from the next compartment of the hopper. At Fig. 7 two of the compartments are shown empty, and the shutters of such compartments open to permit of the free passage beneath them of the cigarettes from the other compartments of the hopper.

The weight T^a from the last compartment of the hopper is permitted to descend until its end pegs or reduced projecting portions arrive at or near the ends of the slots or apertures, as t, in the hopper in order that it may act upon the lever U, and thus raise a blind or shutter, as V, at the back of the window M. Such blind or shutter has a word, as "Empty," displayed thereon to indicate that the hopper is exhausted.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination, a casing having coin and discharge openings therein, a hopper, a drum, means for rotating the same, and locking mechanism for said drum comprising a notched disk on the drum-shaft, a lever adapted to engage said notches, means for normally holding the engaging portion of said lever raised, a coin-catch secured to said lever adapted to receive the coin deposited in the coin-slot, whereby the engaging end of said lever is depressed and means for discharging the coin from said catch to permit the end of the lever to rise.

2. In combination, a casing, a hopper, a drum, means for locking the drum comprising a disk and a coacting pivoted lever normally in engagement with said disk, a coin-chute, a coin-catch carried by said lever, and means for releasing the coin from said catch operated by the rotation of said disk.

3. In combination, a casing, a hopper, a drum, means for locking the drum comprising a disk and a coacting pivoted lever normally in engagement with said disk, a coin-chute, a pivoted coin-catch, an arm extending therefrom, and pins carried by said disk coacting with said arm on the rotation of the drum to tilt the catch and discharge the coin therefrom, substantially as described.

4. In prepayment or coin-in-the-slot machines for the delivery of cigarettes and other articles, the combination with an intermittently-rotatable grooved barrel B and an adjustably-weighted lever F engaging the notched disk G until overbalanced by the weight of the coin, of the hopper L provided with a hinged base-piece L' having projecting stalks P P' abutting against ratchet-wheels O O' which rotate with the said barrel B, substantially as described.

5. In prepayment or coin-in-the-slot machines for the delivery of cigarettes and other articles, the combination with an intermittently-rotatable grooved barrel B and an adjustably-weighted lever F engaging the notched disk G until overbalanced by the weight of the coin, of a hopper divided by internal partitions into a number of compartments, each of the said partitions having a sliding shutter Q at its lower end which is retained in its closed position against the action of a spring R, by lever-bolts S, the said bolts being withdrawn when the weight T bears upon them, substantially as described.

6. The combination with a casing having a coin and a discharge opening therein, and a hopper a carrier adapted to receive the goods from the hopper and locking means for the carrier adapted to be released by a coin, of a series of compartments in said hopper, a discharge-chute common to all of said compartments, a partition in said chute located to the rear of each compartment, and means for automatically raising each of the partitions as the compartment in advance of the same empties, substantially as described.

7. The combination with a casing having a

coin and a discharge opening therein, and a
hopper a carrier adapted to receive the goods
from the hopper and locking means for the
carrier adapted to be released by a coin, of a
5 series of compartments in said hopper, a dis-
charge-chute common to all of said compart-
ments, a partition in said chute located to the
rear of each compartment, and means for au-
tomatically raising each of the partitions as
10 the compartment in advance of the same
empties, an indicator for showing the com-

partments are empty, means for operating the
same, and a controller for said mechanism
adapted to actuate the same when the last
article in the rear compartment is discharged. 15

In witness whereof I have hereunto set my
hand in presence of two witnesses.

WILLIAM LUKE DENNIS.

Witnesses:

EDWARD MARKS,
HERBERT BOWKETT.